How Monetary and Fiscal Policies Affect Exchange Rates

Changes in a nation's monetary and fiscal policies affect its exchange rates and its balance of trade through the interest rate, income and the price level. Changes in the value of a country's currency may affect the balance of trade and aggregate demand. The value of real output and price levels may also be affected. Domestic policies influence currency values, and currency values influence domestic policies. The complexity of the connection leads to careful evaluation of any change in domestic policy goals. Policy makers cannot ignore the international effects of changes in monetary and fiscal policies.

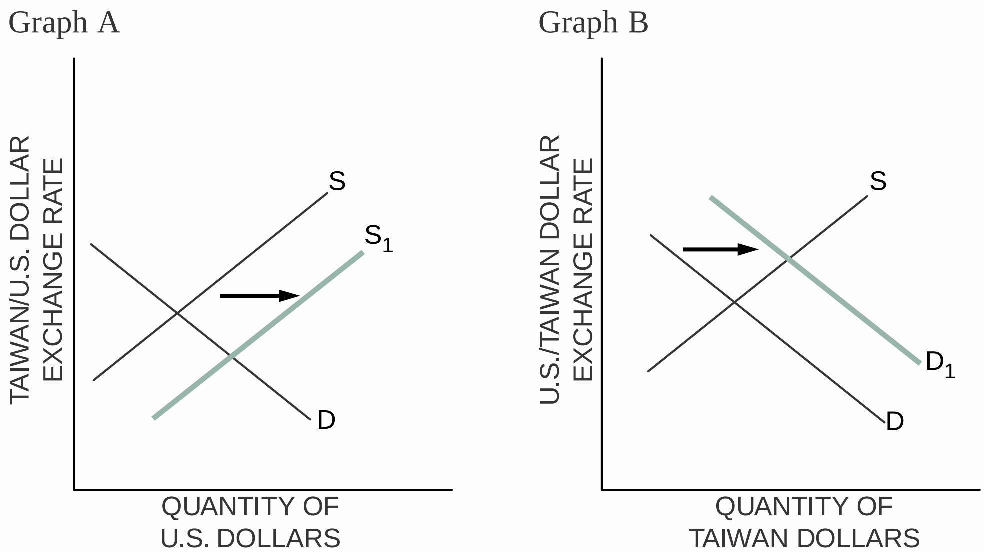
A series of situations is presented below. In each case:

- Evaluate the expected effects on exchange rates in the United States and the other country. Use the currency graphs provided to reflect changes in the currency values.
- Analyze the impact of the currency changes on the U.S. economy as it applies to net exports, balance of trade, aggregate demand and price levels. *Work out the situations in the short run only.*

1. The U.S. government initiates a personal income tax reduction plan, leaving every tax-paying American with more disposable income.

   (A) What will happen as a result to trade between the United States and Taiwan?
   Americans will buy more Taiwanese and domestic goods.

Figure 54.1
U.S. Government Reduces Taxes



(B) In Graph A, what happens to the U.S. dollar? *It depreciates.*

(C) In Graph B, what happens to the Taiwanese dollar? *It appreciates.*

(D) As a result of the fiscal policy,

(i) U.S. aggregate demand shifts (*left* / *right*).

(ii) Price levels in the United States (*rise* / *fall*).

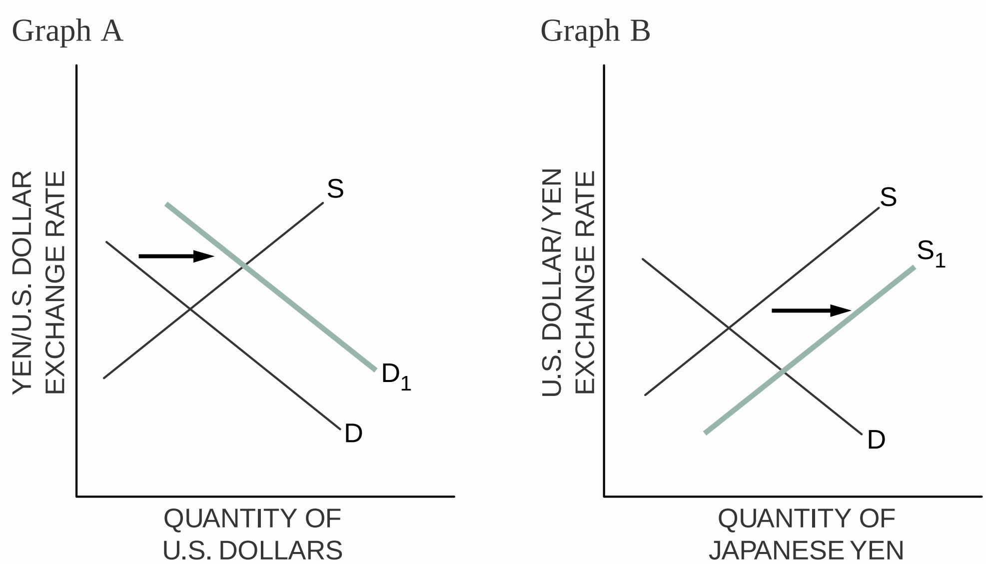
(iii) U.S. imports (*increase* / *decrease*). Explain why. *The increase in disposable income increases the demand for all goods, including foreign goods. Furthermore, the increase in U.S. prices makes foreign goods relatively less expensive.*

(iv) U.S. exports (*increase* / *decrease*). Explain why. *The relative price to foreigners of U.S. goods has increased, so foreigners buy less.*

2. Japan's fiscal policies lead to an increase in Japan's real GDP.

(A) What will happen as a result to trade between the United States and Japan? *Japan buys more U.S. goods because Japanese incomes rise.*

Figure 54.2
Japan's Real GDP Increases



(B) In Graph A, what happens to the U.S. dollar? *It appreciates.*

(C) In Graph B, what happens to the Japanese yen? *It depreciates.*

(D) As a result of the changing value of the U.S. dollar,

(i) U.S. exports *(increase / decrease)*. Explain why. *It takes more yen to buy each dollar; therefore U.S. goods cost more in yen than previously, and exports to Japan decrease.*

(ii) U.S. imports *(increase / decrease)*. Explain why. *Each dollar buys more yen; therefore Japanese goods are cheaper in U.S. dollars, and imports from Japan increase.*

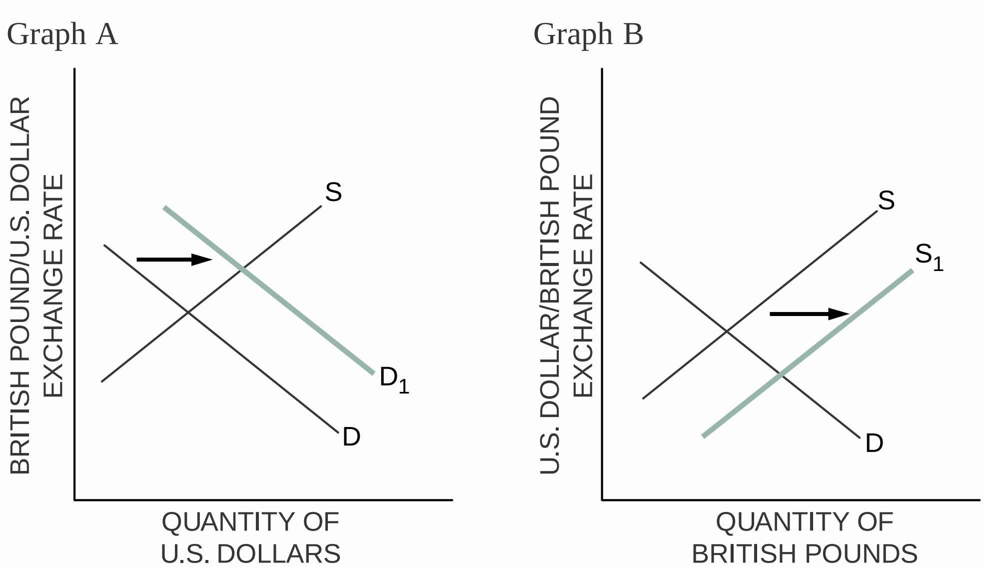
(iii) U.S. aggregate demand shifts *(left / right)*.

(iv) Price levels in the United States *(rise / fall)*.

3. The U.S. federal budget deficit increases, which causes increases in the interest rate. (Assume trade with Great Britain.)

(A) What will happen as a result to trade between the United States and Great Britain? *British investors will want to buy U.S. bonds.*

Figure 54.3
Interest Rates in the United States Increase



(B) In Graph A, what happens to the U.S. dollar? *It appreciates.*

(C) In Graph B, what happens to the British pound? *It depreciates.*

(D) As a result of the changing value of the U.S. dollar:

(i) U.S. exports *(increase / decrease)*. Explain why. *It takes more pounds to buy each dollar; therefore U.S. goods cost more in pounds than previously, and exports to Great Britain decrease.*

(ii) U.S. imports *(increase / decrease)*. Explain why. *Each dollar buys more pounds; therefore British goods are cheaper in U.S. dollars, and imports from Great Britain increase.*

(iii) U.S. aggregate demand shifts *(left / right)*.

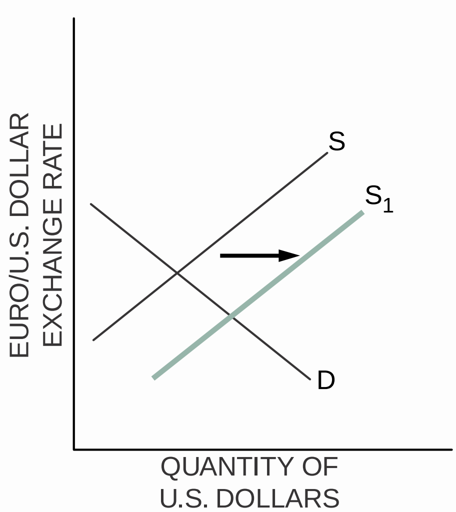
(iv) Price levels in the United States *(rise / fall)*.

4. Europe's interest rates are increasing, while the U.S. interest rate remains relatively constant.

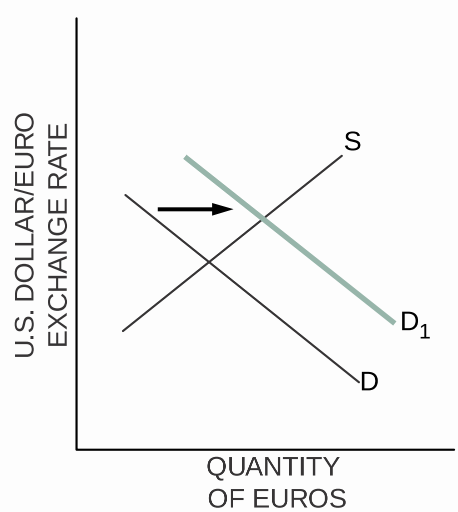
(A) What will happen as a result to trade between the United States and Europe? *Europeans will sell U.S. bonds to buy European bonds.*

Figure 54.4
Interest Rates in Europe Increase

Graph A



Graph B



(B) In Graph A, what happens to the U.S. dollar? *It depreciates.*

(C) In Graph B, what happens to the European euro? *It appreciates.*

(D) As a result of the changing value of the U.S. dollar,

(i) U.S. exports (*increase* / decrease). Explain why. *It takes more dollars to buy each euro; therefore U.S. goods cost less in euros than previously, and exports to Europe increase.*

(ii) U.S. imports (increase / *decrease*). Explain why. *Each dollar buys fewer euros; therefore European goods are more expensive in dollars, and imports from Europe decrease.*

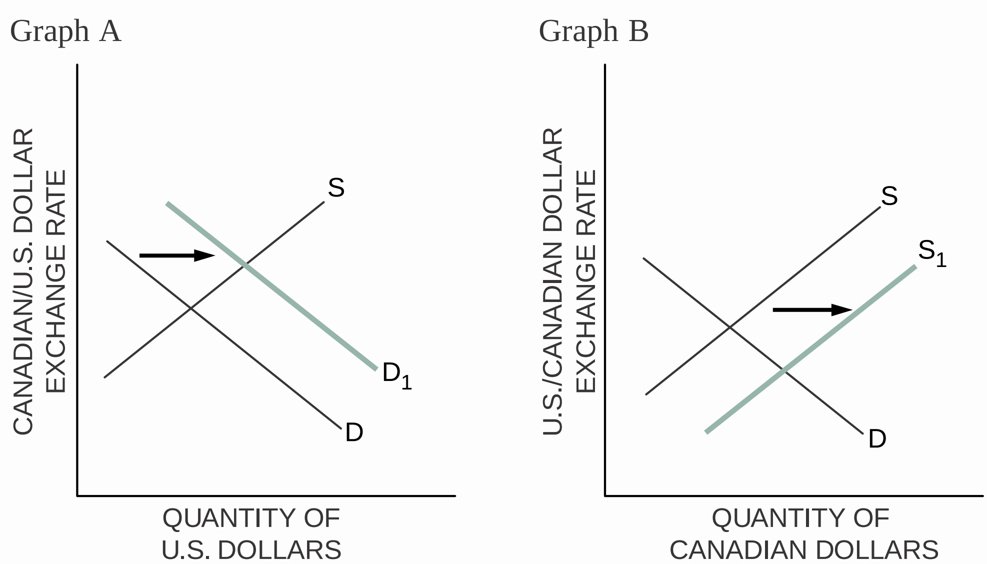
(iii) U.S. aggregate demand shifts (left / *right*).

(iv) Price levels in the United States (*rise* / fall).

5. There is a rapid increase in the Canadian price level while the U.S. price level remains relatively constant.

(A) What will happen as a result to trade between the United States and Canada? *Canadians will want to buy U.S. goods.*

Figure 54.5
The Price Level in Canada Increases



(B) In Graph A, what happens to the U.S. dollar? *It appreciates.*

(C) In Graph B, what happens to the Canadian dollar? *It depreciates.*

(D) As a result of the changing value of the U.S. dollar:

(i) U.S. exports *(increase / <u>decrease</u>)*. Explain why. *It takes more Canadian dollars to buy each U.S. dollar; therefore U.S. goods cost more in Canadian dollars than previously. Therefore exports to Canada decrease.*

(ii) U.S. imports *(<u>increase</u> / decrease)*. Explain why. *Each U.S. dollar buys more Canadian dollars; therefore Canadian goods are cheaper in U.S. dollars. Therefore imports from Canada increase.*

(iii) U.S. aggregate demand shifts *(<u>left</u> / right)*.

(iv) Price levels in the U.S. *(rise / <u>fall</u>)*.

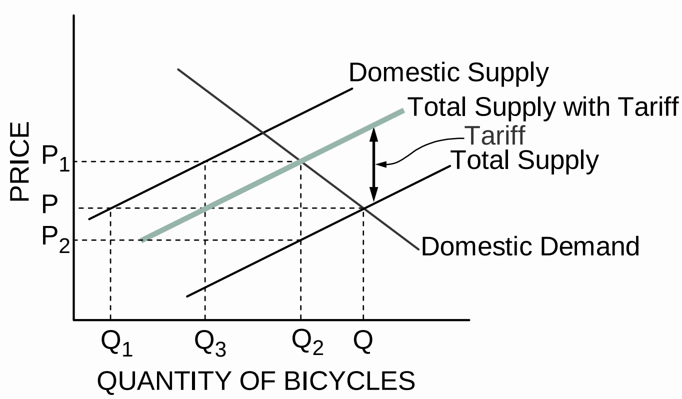
The International Way of Thinking

1. True, false or uncertain, and explain why? "Nations do not trade; people trade."
   True. People make the decision to trade because two or more parties involved in the exchange expect to gain. For example, an American consumer buys a car made by Toyota in Japan. The consumer buys from Toyota. The United States does not buy from Japan.

2. Use one example from your own life when you specialized in doing something in which you had a comparative advantage and traded for something in which someone else had a comparative advantage. *There can be many different answers to this. The students should show that the exchange is based on relative opportunity costs.*

3. Assume the U.S. government has placed a high tariff on imported bicycles.

   (A) Use a supply and demand graph to show the effect of the tariff on the U.S. market for bicycles.



In the graph above, before the tariff, the price was P and the equilibrium quantity was Q. The domestic producers were producing Q_1 and the foreign producers were producing $(Q – Q_1)$. The imposition of a tariff decreases the supply curve because of the increased cost of production to cover the tariff. The price of bicycles has increased and the quantity supplied, Q_2, to the U.S. market has decreased. However, the price received by the foreign suppliers has decreased because of the tariff. Domestic producers produce Q_3 after the tariff is imposed.

(B) Explain the effects of the tariff on the price and quantity of bicycles available to U.S. consumers. *Looking at the graph, the imposition of the tariff has increased the price. The price of bicycles has increased, and the quantity has decreased.*

(C) What are the effects of the tariff on

(i) foreign bicycle manufacturers? *Decrease in output and a decrease in after-tariff price. Although the price paid by the consumer has increased, the foreign producer must pay the tariff, and thus the real price of the bicycle received by foreign producers has decreased. In the graph,* P_2 *shows this after-tariff price.*

(ii) domestic bicycle manufacturers? *Increased price and quantity produced; domestic producers are helped. Domestic producers initially produced* Q_1*; after the tariff they are producing* Q_3*.*

(iii) U.S. consumers? *Consumers are hurt because they must pay a higher price and have fewer bicycles to buy.*

4. The table below shows how much wine and cheese Germany and France can produce in a day.

	Wine	Cheese
Germany	25 liters	30 kilos
France	50 liters	40 kilos

(A) Which country has an absolute advantage in wine production? Why? *France, because it produces more in one day.*

(B) Which country has an absolute advantage in cheese production? Why? *France, because it produces more in one day.*

(C) Which country has a comparative advantage in wine production? Why? *France. The opportunity cost of a bottle of wine in France is* $4/5$ *of a kilo of cheese. In Germany it is 1.2 kilos of cheese.*

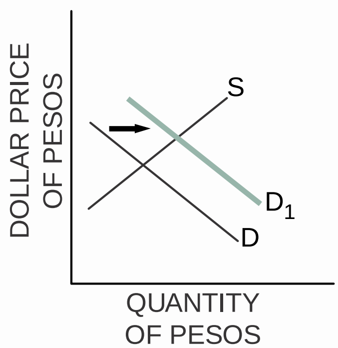
(D) Which country has a comparative advantage in cheese production? Why? *Germany. The opportunity cost of a kilo of cheese is $5/6$ of a bottle of wine. In France, it is 1.25 bottles of wine.*

(E) Based on the data above and considering comparative advantage only, what should France import? What should France export? *France should import cheese and export wine.*

(F) Based on the data above and considering comparative advantage only, what should Germany import? What should Germany export? *Germany should import wine and export cheese.*

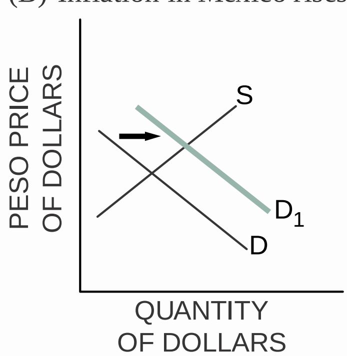
5. For each of the following situations, explain the effect of the event on the value of the U.S. dollar in relation to the Mexican peso. Draw a supply and demand graph to illustrate each situation.

(A) Americans increase their demand for Mexican tomatoes.



The value of the peso will increase because Americans will demand pesos to buy Mexican tomatoes. The peso will appreciate. The dollar will depreciate.

(B) Inflation in Mexico rises at a higher rate than in the United States.



Mexicans will want to buy more American goods, so demand for the dollar will increase. The dollar will appreciate. The Mexican peso will depreciate.

(C) Americans increase their investments in Mexico because they feel the Mexican economy will be strong. *U.S. investors will have to buy pesos to invest in Mexico. This will increase the demand for the peso. The peso will appreciate; therefore, the dollar will depreciate relative to the peso. See the graph in the answer to Question 5(A).*

(D) Interest rates rise in the United States and have become relatively higher than Mexican interest rates. *Mexicans will invest in the United States to take advantage of higher interest rates, so demand for the dollar will increase. The dollar will appreciate. See the graph in the answer to Question 5(B).*

(E) Mexico becomes a much more popular tourist destination for Americans. *American tourists will have to buy pesos. The demand for the peso will increase; the peso will appreciate, and the dollar will depreciate. See the graph in the answer to Question 5(A).*

6. Explain three effects of a new law that would forbid U.S. citizens and businesses from trading with any other country.

Effects include:

- *Imports and exports would decrease because of retaliation by foreign countries.*
- *Prices would be higher because we would not benefit from the comparative advantage (lower opportunity cost) of producing goods in other countries.*
- *The standard of living would be lower.*
- *There would be far fewer goods and services and much less variety of goods and services.*

7. Assume that the United States increases its federal budget deficit, which causes interest rates to rise.

(A) What would be the effect of this on the international value of the dollar? Why? *Higher interest rates would attract foreign investment. The demand for the dollar would increase, and the value of the dollar would rise (appreciate).*

(B) What would be the effect of this on the U.S. balance of trade? Why? *A stronger dollar would make U.S. goods more expensive in foreign countries and foreign goods less expensive in the United States. This would decrease U.S. exports and increase U.S. imports. The trade balance (exports – imports) would adjust.*

(C) Would the budget deficit and higher interest rates tend to increase or decrease aggregate demand? Why? *The increase in the federal budget deficit would cause aggregate demand to increase. However, the increase in interest rates will cause investment and some parts of consumption to decrease. The decrease in exports would cause aggregate demand to decrease. The net effect is unknown given the information in the question.*

8. How could a nation have a negative balance of trade and still not have a deficit in its balance of payments? *The balance of payments includes the current and capital accounts. The current account is the balance of trade and considers the export and imports of goods and services only. Thus, the impact of capital inflows and outflows can outweigh the effects of imports and exports of goods and services.*